

SOME NEW OR LITTLE KNOWN CYPERACEAE OF
EASTERN NORTH AMERICA.

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CAREX SETACEA Dewey, var. **ambigua** (Barratt), n. comb. *C. vulpinoidea*, var. *ambigua* Barratt according to Boott, Ill. iii. 125, t. 406 (1862). *C. xanthocarpa* Bicknell, Bull. Torr. Bot. Club, xxiii. 22 (1896).

This plant was beautifully illustrated by Francis Boott from Connecticut specimens and there can be no question from the plate and notes of the identity of Barratt's *C. vulpinoidea*, var. *ambigua* with Mr. Bicknell's *C. xanthocarpa*. An abundant series of material in the herbarium of Chester Dewey of his own *C. setacea* and of Sartwell's *C. scabrior* shows that while the best *C. setacea* (including *scabrior*) has ordinarily dull brown or drab lanceolate or lance-ovate perigynia tapering gradually to the serrulate beak, many specimens pass very definitely either in color or in the outline of the perigynia to a commoner plant which in its best development has the broad-ovate to orbicular perigynia abruptly short-beaked and often golden-brown in color, the latter character suggesting the name *xanthocarpa*. The transitions between these two extremes are so numerous that it seems to the writer that they are best treated as phases of one plant rather than as distinct species.

CAREX **Harperi**, n. sp. Similar to *C. leptalea* Wahl.: the capillary culms 2.5 to 7 dm. long; the more crowded spike with strongly overlapping linear-oblong perigynia (4 to 5 mm. long): the acuminate scales whitish: the achenes punctulate, barely lustrous, sharply trigonous.—GEORGIA, springy place in swamp of Rocky Comfort Creek, near Louisville, Jefferson County, April 9, 1904 (*R. M. Harper*, no. 2109): FLORIDA, without locality (*Chapman*); bogs and swamps, Apalachicola (*Chapman* in Biltmore Herb. no. 271b): ALABAMA, Gateswood, May 1, 1903 (*S. M. Tracy*, no. 8656): MISSISSIPPI, Coopolis, April 24, 1898 (*S. M. Tracy*, no. 4122): LOUISIANA, without locality (*Hale*): TEXAS, without locality (*Wright*).

C. leptalea is a common plant of northern cold swamps and bogs, extending from Newfoundland to British Columbia, south to Pennsylvania, the Great Lakes and Missouri, and in the mountains to

North Carolina, Colorado and Oregon. *C. Harperi*, on the other hand, is a plant of the southern coastal plain, which may be expected to extend along the coast or in the Mississippi Basin considerably north of its present known range. Its chief points of distinction, already enumerated, may be contrasted with those of *C. leptalea* as follows: the perigynia of *C. Harperi* are 4 to 5 mm. long and strongly overlapping, those of *C. leptalea* 2.5 to 3.5 mm. long and subalternate; the scales of *C. Harperi* are whitish and acuminate, those of *C. leptalea* brownish and mostly obtuse or obtusish; the achenes of *C. Harperi* punctulate, barely lustrous, and sharply angled, those of *C. leptalea* lustrous, not punctulate, and obtusely angled.

CAREX VIRESCENS Muhl. "in lit." was published almost simultaneously and with essentially identical descriptions by Willdenow¹ and by Schkuhr,² each citing the other's publication. From their descriptions "spica androgyna lineari pedunculata inferne mascula, femineis subapproximatis binis subpedunculatis linearibus, . . . fructibus globoso-triquetris obtusis pubescentibus . . . Capsulae maturae virides subnervosae pubescentes," and from the detailed drawing of the plant in Schkuhr's work there is no question of the plant Muhlenberg had in hand.

There are two extreme variations of *Carex virescens*. One has 2 to 4 linear-cylindric spikes, 2 to 4 mm. thick, the terminal one (including the staminate base) 1.8 to 4 cm. long, and from $\frac{1}{10}$ to $\frac{1}{7}$ as thick. The other has 2 to 5 oblong-cylindric to subglobose spikes 3 to 5 mm. thick, the terminal one 9 to 18 mm. long and from $\frac{1}{3}$ to $\frac{1}{2}$ as thick. The perigynia of the slender-spiked plant are somewhat costate, of the thicker spiked plant less so, or nearly nerveless. These two plants are ordinarily well marked but numerous transitional specimens show them to be varieties of one species, and they are usually so treated though by some authors they are accepted as distinct species: the shorter- and thicker-spiked plant as *C. virescens*, the longer- and slender-spiked plant as var. *costata* Dewey (*C. costellata* Britton). With the exception of Dewey, the earlier students of American Carices — Torrey, Carey, Boott, and others — made no strong distinction between the plants, though Boott, in his Illustrations, recognized the

¹ Willd. Sp. iv. 251 (1805).

² Schkuhr, Riedgr. Nachtr. 45, t. Mmm. fig. 147 (1806).

slender-spiked plant as true *C. virescens* illustrating that plant in full, and showing as an extreme form the inflorescence of the thicker-spiked plant. Subsequent authors, on the other hand, have followed the lead of Dewey in treating as true *C. virescens* the short-spiked plant, while the plant with elongate linear-cylindric spikes has been regarded as a variety (var. *costata* Dewey) or as a species (*C. costellata* Britton). It needs only a brief examination of the original description and figures, however, to show that in so doing, recent authors have treated the wrong plant as *C. virescens*; and that the plant of Muhlenberg, beautifully illustrated by Schkuhr, was the long-spiked extreme which is now passing as *C. virescens*, var. *costata* Dewey, or *C. costellata* Britton. The other, the short-spiked plant, which is one of the commonest and most attractive sedges of New England, is apparently without a name, and in recognition of the long and painstaking study of the group by the scholarly New England botanist, Charles Walter Swan, it may appropriately be called

C. VIRESCENS, var. **Swanii**, n. var. Usually lower than the species, 1.5 to 8 dm. high: the 2 to 5 oblong-cylindric to subglobose spikes 3–5 mm. thick; the terminal one (including the staminate base) 9 to 18 mm. long, $\frac{1}{5}$ to $\frac{1}{3}$ as thick.—*C. virescens* of recent authors.—Dry banks and copses, southern Maine to Ontario and southward. M. A. Day's no. 202 from Manchester, Vermont, may stand as the type of this variety.

CAREX LAXICULMIS Schwein., var. **copulata** (Bailey), n. comb. *C. retrocurva*, var. *copulata* Bailey, Herb. distr. no. 161 (1886). *C. digitalis*, var. *copulata* Bailey, Mem. Torr. Bot. Club, i. 47 (1889).

This variety as first designated by Professor Bailey on the label of his no. 161, from Lansing, Michigan, in 1886 was supposed to include "all our western plants" of the *digitalis-laxiculmis* (*retrocurva*) group. The particular plant (no. 161) in question was greener than most of the *C. laxiculmis* (*retrocurva*) of the coastal states and this point was strongly emphasized by Professor Bailey, who later, on account of the green not glaucous foliage of the plant transferred it to varietal rank under *C. digitalis*. Subsequent collections show that the plant may sometimes be glaucous,—as for example, material in the Gray Herbarium from Alma, Michigan, Erie County, Ohio, Port Stanley, Port Dover and Leamington, Ontario;—and specimens of what is in all other points typical *C. laxiculmis* of the Atlantic States,—from Waverly and Jamaica Plain, Massachusetts—show that the eastern

plant is not always glaucous. In fact the glaucous or non-glaucous foliage is not a satisfactory basis for the separation of *C. laxiculmis* and *C. digitalis*. The basal leaves, however, seem to furnish a very accessible character, a large series of *C. digitalis* having the basal leaves from 2 to 5 mm. broad, while an equally full representation of *C. laxiculmis* shows the basal leaves to vary in breadth from 6 to 12 mm. The western tendency of this species differs from the coastal plant, however, in a character which seems to be fairly constant in the material at hand. True *C. laxiculmis*, which occurs from southern Maine to Virginia and Missouri, principally in the coastal states, has perigynia 2.8 to 3 mm. long. The more characteristic plant of the interior, which may well retain the varietal name, *copulata*, first applied to an extreme specimen from Michigan, occurs from the Champlain Valley in Vermont to Delaware and west to Ohio, Michigan and Ontario, and has the perigynia distinctly larger, 3.3 to 4 mm. long.

CAREX LAXIFLORA Lam., var. **leptonervia**, n. var. Slender, 1.5 to 7 dm. high: leaves 0.5 to 1 cm. broad: pistillate spikes linear-cylindric, loosely-flowered, 1 to 2.5 cm. long; the 2 or 3 upper crowded at the base of the staminate; the lower remote: perigynia oblong-fusiform, nerveless or with 1 to 3 faint nerves on each face.— Newfoundland to Ontario, south to northern and central New England, central New York, and Minnesota and along the mountains to North Carolina and Tennessee. A northern extreme of the species differing from all the other varieties of *C. laxiflora* in its nerveless or only slightly nerved perigynia. The following from among very numerous specimens examined are characteristic. NEWFOUNDLAND, Birchy Cove, Bay of Islands, June 22, 1895 (*A. C. Waghorne*, no. 8): QUEBEC, Allen's Ravine, Mt. Albert, Gaspé Co., August, 1905 (*J. F. Collins & M. L. Fernald*): NOVA SCOTIA, Boylston, July, 1890 (*C. A. Hamilton*): MAINE, low woods, Fort Fairfield, July 6, 1893 — type (*M. L. Fernald*, no. 146): NEW HAMPSHIRE, Mt. Washington, altitude 3500 feet, July 9, 1888 (*E. & C. E. Faxon*): VERMONT, low open woods, New Haven, June 5, 1898 (*E. Brainerd*): MASSACHUSETTS, Shirley (*W. P. Conant*): CONNECTICUT, sphagnum bog, Winchester, June 25, 1901 (*C. H. Bissell*): NEW YORK, Pickerel Pond, near Axton, June 29, 1899 (*Rowlee, Wiegand & Hastings*); Penn Yan, 1862 (*Sartwell*): ONTARIO, Niagara, May 14, 1901 (*J. Macoun*, no. 33,697): MINNESOTA, Two Harbors, June, 1893 (*E. P. Sheldon*): NORTH CAROLINA, thickets, Waynesville, June 9, 1897 (Biltmore Herb. no. 1796a): TENNESSEE, on the higher regions of the Smoky Mts., May, 1844 (*F. Rugel*, no. 103).

(To be continued.)